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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,261	04/26/2004	Yu-Hsiang Hsu	8905-US-PA-1	3260

31561 7590 08/31/2005

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE
7 FLOOR-1, NO. 100
ROOSEVELT ROAD, SECTION 2
TAIPEI, 100
TAIWAN

EXAMINER

AFZALI, SARANG

ART UNIT	PAPER NUMBER
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3729

DATE MAILED: 08/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/709,261	HSU ET AL.	
	Examiner	Art Unit	
	Sarang Afzali	3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The applicant's amendment filed on 08/16/2005 has been fully considered and made of record.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 3, 6-8, 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogiso et al. (US 6,012,207) in view of Lee et al. (US 6,597,085).
3. Claims 4, 5, 9, 10, 14, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogiso et al. in view of Lee et al. and further in view of Rosen (US 2,974,296).

For detailed explanation refer to earlier office action mailed on 05/18/2005.

Allowable Subject Matter

4. Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

5. Applicant's arguments filed on 08/16/05 have been fully considered but they are not persuasive.

6. As for claims 1-3, 6-8, and 11-13, Applicant argues on page 6, paragraphs (3-7), that Ogiso does not disclose the function electrodes 22a and 22f with the acute angle. And electrodes 23a-23f and 24a-24f are used to have the polarization, but not the augment electrode used to disperse the charges to the acute tip. The Examiner respectfully disagrees with the above arguments.

7. As for function electrodes having acute angles, Ogiso on col. 7, lines 22-28 clearly state that the positions, shapes, and numbers of all different types of electrodes can be changed as required. And, Lee clearly disclose different shapes including a modal shape with acute angle that is used as an electrode in a piezoelectric workpiece. Therefore, the Ogiso in view of Lee combination clearly discloses and renders obvious the main part of the Applicant's invention as far as the electrode having an acute angle is concerned.

8. As for the electrodes 23a-23f and 24a-24f in Ogiso are being used for polarization and not as an augment electrode to disperse the charges to the acute tip, Ogiso on col. 6, Table 1 and lines 57-65, disclose about their preferred embodiment not having structural defects such as micro-cracks formed during polarization (lines 64-65). And further, Ogiso on col. 6, lines 66-68 and col. 7, lines 1-10 clearly disclose that the reasons for the second preferred embodiment achieving a higher mean strength than the first preferred embodiment and the third preferred embodiment achieving even a

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higher mean strength than the second preferred embodiment are mainly due to the presence of the electrodes 23a-23f, 24a-24f, 33a-33f, and 34a-34f which result in a less inclined polarization and less internal stress. Therefore, regardless of what these electrodes are called in Ogiso, they effectively serve the same purpose as what the Applicant is claiming through his augment electrodes and that is to smooth out the polarization orientation distribution regions within the said piezoelectric regions without any acute angle as claimed in claims 1, 6 and 11.

9. As for dependent claims 4-5, 9-10, 14-15, Applicant argues on pages 6-7, paragraph (8) that However, Rosen failed to disclose the augment electrode associating with the function electrode with the acute angle, either. Even though Rosen is in combination with Ogiso and Lee, Rosen does not provide the missing features recited in independent claims for Ogiso and Lee. The Examiner respectfully disagrees with the above argument. As stated in the earlier office action mailed on 05/18/2005, Rosen has been cited only for the teaching of an augment electrode having a shape of a closed-loop ring in order to further modify Ogiso in view of Lee. It is not the intent of Rosen to overcome any other limitations or provide missing features of the independent claims as suggested by the Applicant. Therefore, the Ogiso in view of Lee and further in view of Rosen is pertinent in disclosing the limitations of the dependent claims 4-5, 9-10, and 14-15.

10. As for paragraph (2) on page 5, the Applicant argues that The augmenting surface electrode of the present invention doe (does) not physically connect to the

electrical circuit during the operation. The Examiner finds this argument to be moot since this information is NOT recited in any claims.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarang Afzali whose telephone number is 571-272-8412. The examiner can normally be reached on 7:00-3:30 M-F.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S.A.

08/26/2005



David P. Bryant
Primary Examiner